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09/595,227	06/16/2000	MINGMING FANG	99154X204201	2766

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EXAMINER

SHAKERI, HADI

ART UNIT	PAPER NUMBER
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3723

22

DATE MAILED: 07/15/2004

Please find below and/or attached an Office communication concerning this application or proceeding.



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**BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES**

Application Number: 09/595,227  
Filing Date: June 16, 2000  
Appellant(s): FANG ET AL.

\_\_\_\_\_  
John Kilyk, Jr.  
For Appellant

**EXAMINER'S ANSWER  
SUPPLEMENTAL**

**MAILED  
JUL 15 2004  
GROUP 3700**

This is in response to the Remand to the Examiner filed June 09, 2004.

The board has remanded this application to the Examiner requesting the Examiner to consider whether any evidence of unexpected results is commensurate with the scope of

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appellants' claims. And further to clarify the claims being rejected. With regards to the latter, the grounds of rejections, as set forth in prior office action, paper No. 12, are as follows;

Claims 1-14 and 17-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Huynh et al. in view of James et al.

Huynh et al. discloses all the limitations of claim 1, i.e., a slurry containing water, an oxidizing agent, abrasive material and higher than 0.04M, col. 2, lines 15-20, phosphate ion or phosphonate ion, col. 2, lines 60-67. Huynh et al. also states that the invention can also be used for other surfaces, col. 1, lines 8-10, except for specifically disclosing the use of the slurry for polishing a surface of a memory disk. James et al. teaches a fixed abrasive polishing system, planarizing substrates including memory disk and semiconductor device substrates. It is known in the art as indicated by James et al. (col. 1, lines 34-37) to apply a CMP polishing system in applications for either a memory disk or a semiconductor device.

It would have been obvious to one of ordinary skill in the art, at the time the invention was made, to apply the slurry of Huynh et al. in polishing a memory disk since it is known in the art to use a CMP system for manufacturing of both semiconductor devices and memory disk, as cited by James et al., and since the invention of Huynh et al. utilizes slurries which are resistant to pH changes.

Regarding claims 2, 3, 5 and 6, PA (Huynh et al. in view of James et al.) meets the limitations, i.e., Huynh et al., Figs. 1 and 2.

Regarding claims 7-10, PA meets the limitations, Huynh et al., col. 2, lines 39-46.

Regarding claim 11, PA meets the limitations, James et al., col. 2, line 67 and col. 3, lines 5-8.

Regarding claims 12-14, PA meets the limitations, Huynh et al., col. 3, line 62.

Regarding claims 17-21, PA meets the limitations, Huynh et al., col. 2, lines 60-67, and col. 3, lines 1-3.

Regarding claims 22, 23, PA meets the limitations, Huynh, col. 2, lines 15-22.

Regarding claim 4, It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the invention of prior art for memory disk comprising nickel-phosphorus, dependent on work-piece parameters, which would involve only routine skill in the art.

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Claims 1-14 and 17-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over James et al. in view of Huynh et al.

James et al. discloses all the limitations of claim 1, i.e., a polishing composition comprising an oxidizer and abrasive material and a pH modifier, col. 4, lines 41-44, except for disclosing 0.04 M or higher phosphate ion or phosphonate ion. Huynh et al. teaches polishing slurry with a pH buffering component comprising phosphoric acid or salt. It would have been obvious to one of ordinary skill in the art, at the time the invention was made, to modify the invention of James et al. with the pH buffer as taught by Huynh et al. to obtain slurries which are resistant to pH changes, Huynh et al. col. 2, line 14.

Regarding claims 2, 3, 5 and 6, PA (James et al. in view of Huynh et al.) PA meets the limitations, i.e., Huynh et al., Figs. 1 and 2.

Regarding claims 7-10, PA meets the limitations, Huynh et al., col. 2, lines 39-46.

Regarding claim 11, PA meets the limitations, James et al., col. 2, line 67 and col. 3, lines 5-8.

Regarding claims 12-14, PA meets the limitations, Huynh et al., col. 3, line 62.

Regarding claims 17-21, PA meets the limitations, Huynh et al., col. 2, lines 60-67, and col. 3, lines 1-3.

Regarding claims 22, 23, PA meets the limitations, Huynh, col. 2, lines 15-22.

Regarding claim 4, It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the invention of prior art for memory disk comprising nickel-phosphorus, dependent on work-piece parameters, which would involve only routine skill in the art.

Claims 15, 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Huynh et al. and James et al. as applied to claim 1 above, further in view of Ishitobi et al., US Patent No. 6,152,976.

PA discloses all the limitations of the above claims, except for weight percentage of the oxidizing agent (0.1 to 5 molar). Ishitobi et al. teaches an abrasive composition for a memory hard disk with an optional oxidizing agents content of greater than 0.01 wt.%. It would have been obvious to one of ordinary skill in the art, at the time the invention was made, to modify the

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composition of Huynh et al. with the weight percent of oxidizer as taught by Ishitobi et al. to enhance the abrading action, Ishitobi et al., col. 5, line 24.

With regards to the former issue, i.e., whether the examples presented in Appellants' application are indicative of unexpected results and should thereby provide sufficient evidence to overcome the rejections applied against the claims on appeal, it is noted that the Examiner did not consider the examples to be indicative of unexpected results per MPEP 706.01 and 706.02. An argument is presented that as indicated in the reply brief, Huynh et al. (the primary reference relied upon) suggests that the pH buffering component of their polishing slurry "does not change the polishing rate to any noticeable degree." (col. 4, lines 18-20), whereas Appellant application, e.g., Examples 1-3 indicates enhanced polishing rate. The conclusion reached from the statement in Huynh et al. that the polishing rate is not changed by pH buffering of the slurry is in error. The statement quoted is out of context; it is merely stating that adding the pH buffering being taught does not diminish the polishing rate of the slurry. Huynh et al. is directed to overcoming the contamination problem. Huynh et al. states, e.g., col. 1, lines 59-62, that "In such a situation, even a few drops of the acidic slurry can cause the neutral slurry to become acidic, thereby diminishing its effectiveness." Huynh et al. further discloses in column 4, lines 8-13, that "Adding only a few drops of the primary slurry to the second slurry causes a significant change in the pH of the slurry, thereby resulting in a reduction in the polishing rate of titanium of up to about 40%." [emphases added], a significant improvement in polishing rate when the buffering technique as disclosed are utilized, which includes phosphate or phosphonate ion, col. 2, lines 58-67 and col. 3, lines 1-3. Huynh et al. further discloses that "the amount of acid and base can vary widely and can be readily determined by those skilled in the art without undue experimentation, once aware of the present disclosure", col. 3, lines 3-6.


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For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,



Hadi Shakeri  
Primary Patent Examiner  
Art Unit 3723

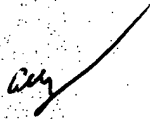
June 28, 2004

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